UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/664,549	09/19/2003	Stanley M. Yamashiro	64693-078	4286

7590 08/25/2006

McDERMOTT, WILL & EMERY
Professional Corporation
Suite 3400
2049 Century Park East
Los Angeles, CA 90067-3208

EXAMINER	
BAXTER, ZOE E	

ART UNIT	PAPER NUMBER
3735	

DATE MAILED: 08/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/664,549	YAMASHIRO, STANLEY M.	
	Examiner	Art Unit	
	Zoe E. Baxter	3735	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-35 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1,2,4,6-10,12-16 and 21-35 is/are rejected.

7)☒ Claim(s) 3,5,11 and 17-20 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 01 March 2004 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 11/07/03.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "805" has been used to designate both adhesive in figure 8(a) and a belt in figure 8(c). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 32 recites that it is a process for measuring the change in volume of a body part but the claim has a step of processing the output of the sensor to determine the ventilation. There is insufficient antecedent basis for this limitation in the claim.

4. Claims 9, 24 and 33-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The term "substantially" in claims 9, 24 and 33-35 is a relative term, which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The phrase substantially the same time is not definite in what is meant by substantially.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

8. Claims 1, 2, 4, 6-8, 12-16, 23, 27, 28, 31 and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by Robertson Jr. et al. (U.S. Patent No. 4267845). Robertson Jr. et al. teach an apparatus for measuring ventilation comprising a magnet (column 2 lines 1-4), an attachment mechanism described as an adhesive disc (column 2 line 5), a magnetometer which has an output signal (column 1 lines 64-65), an attachment mechanism for the magnetometer (column 2 line 5) and a microprocessor to produce multiple readouts (column 2 lines 1-3).

9. Claim 2: Robertson Jr. et al. teach the apparatus comprises a second magnet (column 1 lines 63-64) and magnet attachment (column 2 line 5). Since there are actually four pairs taught by Robertson Jr. et al. it inherently teaches that there must be a second pair.

10. Claim 4: Robertson Jr. et al. teach the apparatus comprises a second magnetic sensor (column 1 lines 63-64) and attachment mechanism (column 2 line 5). Since there are actually four pairs taught by Robertson Jr. et al. it inherently teaches that there must be a second pair.

11. Claim 6: Robertson Jr. et al. teach the use of an adhesive disc to attach the electromagnet and sensor pair to the skin (column 2 lines 4-5).

12. Claim 7: Robertson Jr. et al. teach the use of an adhesive disc, which is a functional equivalent of tape.

13. Claim 12: Robertson Jr. et al. teach a process for measuring ventilation comprising affixing a first permanent magnet to a location, affixing a first magnet is sensor to a second location (column 1 lines 62-66), the first sensor having an output (column 1 lines 64-65) and processing the output to determine the ventilation (column 2 lines 1-3).

14. Claim 13: Robertson Jr. et al. teach the process of affixing a second magnetic sensor to a third location of the surface, since Robertson Jr. et al. teach using four pair it is inherent that the second pair of magnet and magnetometer are affixed at a separate location (column 2 line 5).

15. Claim 14: Robertson Jr. et al. teach the process of affixing a second magnet to a third location of the surface, since Robertson Jr. et al. teach using four pair of magnet and magnetometer pairs, it is inherent that the second pair of magnets are affixed to a separate location (column 2 line 5).

16. Claim 15: Robertson Jr. et al. teach the sensors to be located on the rib cage on the anterior and posterior which would be the chest and back and also on the abdomen (column 1 lines 64-65).

17. Claim 16: Robertson Jr. et al. teach the use of a magnetometer to measure the linear dimension changes between the magnet and the magnetometer (column 1 lines 30-34). It is obvious that the magnetometer is measuring the change of field strength that is changing relative to the position, which is changing during movement from ventilation, of the magnet in relation to the sensor.

18. Claim 23: Robertson Jr. et al. teach the importance of placing the pairs parallel to one another because if the angular relationship changes errors in distance measurements will occur as the magnetic flux at the sensor will change (column 2 lines 9-14).

19. Claim 27: Robertson Jr. et al. teaches an apparatus for measuring ventilation comprising a first electromagnet which is functionally equivalent to a permanent magnet as claimed (column 2 line 4), a magnetometer which has an output signal (column 1 lines 64-65), and a microprocessor to produce multiple readouts (column 2 lines 1-3).

20. Claim 28: Robertson Jr. et al. teach an apparatus comprising a second magnet (column 1 lines 63-64) attached at a different site. Since Robertson Jr. et al. actually teach four magnetic pairs it is inherent that there is a second magnet at a third site separate from the first two sites.

21. Claim 31: Robertson Jr. et al. teach an apparatus for measuring change in volume comprising a first electromagnet which is functionally equivalent to a permanent magnet as claimed (column 2 line 4), an attachment mechanism (column 2 line 5), a magnetometer having an output signal (column 1 lines 64-65), an attachment mechanism for the magnetometer (column 2 line 5) and a microprocessor to produce a change in volume based on the output of the magnetometer (column 2 lines 1-3).

22. Claim 32: Robertson Jr. et al. teach a process for measuring volume change comprising affixing a first magnet to a location, affixing a magnet sensor to a second location (column 1 lines 62-66) and processing the output (column 2 lines 1-3).

23. Claims 33-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Grajales et al. (U.S. Patent No. 6930608). Grajales et al. teach a sensor comprising a magnet (column 4 lines 32-34) and an electrode (column 6 lines 9-12) and an attachment mechanism (column 2 lines 46-59).

24. Claim 34: Grajales et al. teach a sensor comprising a magnet sensor (column 4 lines 4-10) and an electrode (column 6 lines 9-12) and an attachment mechanism (column 2 lines 46-59).

25. Claim 35: Grajales et al. teach a sensor comprising a multitude of magnets (column 4 lines 32-34), electrodes (column 6 lines 9-12), and an attachment mechanism to attach all the pieces at essentially the same time (column 2 lines 46-59).

Claim Rejections - 35 USC § 103

26. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

27. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson Jr. et al. in view of Sackner (U.S. Patent No. 5178151). Robertson Jr. et al. teach an apparatus for measuring ventilation comprising a first magnet (column 2 line 4), an attachment mechanism described as an adhesive disc (column 2 line 5), a magnetometer which has an output signal (column 1 lines 64-65), an attachment mechanism for the magnetometer (column 2 line 5) and a microprocessor to produce

multiple readouts (column 2 lines 1-3). Robertson et al. fail to teach that the magnet attachment mechanism and the sensor attachment mechanism include a strap. Sackner teaches that a strap can be used for attaching the magnet to the patient. It would be obvious to one skilled in the art to use a strap because as Sackner teaches it enables the patient to exercise (column 7 lines 1-16).

28. Claims 9, 10 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson Jr. et al. in view of Grajales et al. (U.S. Patent No. 6930608). Robertson Jr. et al. teach an apparatus for measuring ventilation comprising a first magnet (column 2 line 4), an attachment mechanism described as an adhesive disc (column 2 line 5), a magnetometer which has an output signal (column 1 lines 64-65), an attachment mechanism for the magnetometer (column 2 line 5) and a microprocessor to produce multiple readouts (column 2 lines 1-3). Robertson fail to teach a mechanism that attaches a first electrode and a magnet to a surface and a second electrode attached to a sensor attachment. Grajales et al. teach an apparatus that can attach a plethora of sensors and electrodes. It would be obvious to one skilled in the art to use a combination to be able to measure both respiration using magnetic sensors as taught by Grajales et al. (column 4 lines 32-34) and EKG using electrodes also taught by Grajles et al. (column 6 lines 9-12). As Grajales et al. teach it is beneficial in some environments for a person to be able to measure multiple physiological parameters in order to increase working efficacy and increase personal safety (column 1 lines 55-67).

29. Claim 10: As stated above Robertson Jr. et al. teach an apparatus for measuring ventilation. Robertson Jr. et al. fail to teach an apparatus wherein the first and second electrodes are configured to operate with an electrocardiogram. Grajales et al. teach that the electrodes can be configured to operate with an electrocardiogram (column 6 lines 9-12). It would be obvious to one skilled in the art to use this method because as Grajales et al. teaches one signal can be used to trigger, warn, or otherwise influence another sensor (column 6 lines 6-9).

30. Claim 11: As stated above Robertson Jr. et al. teach an apparatus for measuring ventilation. Robertson fail to teach a mechanism that attaches a first electrode and a magnet to a surface and a second electrode attached to a sensor attachment. Grajales et al. teach an apparatus that can attach a plethora of sensors and electrodes. It would be obvious to one skilled in the art to use a combination to be able to measure both respiration using magnetic sensors as taught by Grajales et al. (column 4 lines 32-34) and EKG using electrodes also taught by Grajles et al. (column 6 lines 9-12). As Grajales et al. teach it is beneficial in some environments for a person to be able to measure multiple physiological parameters in order to increase working efficacy and increase personal safety (column 1 lines 55-67).

31. Claim 24: Robertson Jr. et al. teach a process for measuring ventilation comprising a first electromagnet which is functionally equivalent to a permanent magnet as claimed (column 2 line 4), an attachment mechanism described as an adhesive disc (column 2 line 5), a magnetometer which has an output signal (column 1 lines 64-65), an attachment mechanism for the magnetometer (column 2 line 5) and a

microprocessor to produce multiple readouts (column 2 lines 1-3). Robertson fail to teach a process of attaching a first electrode and a magnet to a surface and a second electrode attached to a sensor attachment. Grajales et al. teach a process that can attach a plethora of sensors and electrodes (column 2 lines 46-59). It would be obvious to one skilled in the art to use a combination to be able to measure both respiration using magnetic sensors as taught by Grajales et al. (column 4 lines 32-34) and EKG using electrodes also taught by Grajles et al. (column 6 lines 9-12). As Grajales et al. teach it is beneficial in some environments for a person to be able to measure multiple physiological parameters in order to increase working efficacy and increase personal safety (column 1 lines 55-67).

32. Claim 25: As stated above Robertson Jr. et al. teach a process for measuring ventilation. Robertson Jr. et al. fail to teach two electrodes that each has an output for the production of an electrocardiogram. Grajales et al. teach Grajales et al. teach that the electrodes can be configured to operate with an electrocardiogram (column 6 lines 9-12). It would be obvious to one skilled in the art to use this method as taught by Grajales et al. one signal can be used to trigger, warn, or otherwise influence another sensor (column 6 lines 6-9).

33. Claim 26: As stated above Robertson Jr. et al. teach a process for measuring ventilation. Robertson Jr. et al. fail to teach an apparatus wherein the first and second electrodes are configured to operate with an electrocardiogram. Grajales et al. teach that the electrodes can be configured to operate with an electrocardiogram (column 6 lines 9-12). It would be obvious to one skilled in the art to use this method as taught by

Grajales et al. one signal can be used to trigger, warn, or otherwise influence another sensor (column 6 lines 6-9).

34. Claims 21, 22, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robertson Jr. et al. in view of Somogyi et al. (U.S. Patent No. 6292680). Robertson Jr. et al. teach a process for measuring ventilation comprising affixing a first permanent magnet to a location, affixing a first magnet is sensor to a second location (column 1 lines 62-66), the first sensor having an output (column 1 lines 64-65), processing the output to determine the ventilation (column 2 lines 1-3) and the process of affixing a second magnet to a third location of the surface (column 2 line 5). Robertson Jr. et al. fail to teach that the magnets are oriented such that the poles of the magnets are oriented in the same direction. Somogyi et al teach that the magnets can be oriented in the same direction (column 5 lines 10-13). It would be obvious to one skilled in the art to orient the magnets in the same direction as Somogyi et al. teach the movement of the magnets changes the summed magnetic field such that a detector can measure and relate that to a calculated parameter (column 5 lines 22-26).

35. Claim 22: As stated above Robertson Jr. et al. teach a process for measuring ventilation. Robertson Jr. et al. fail to teach that the magnets are oriented such that the poles of the magnets are oriented in opposite directions. Somogyi et al teach that the magnets can be oriented in opposite directions (column 3 lines 49-50). It would be obvious to one skilled in the art to orient the magnets in the same direction as Somogyi et al. teach the movement of the magnets changes the summed magnetic field such

that a detector can measure and relate that to a calculated parameter (column 3 line 66-column 4 line 8).

36. Claim 29: Robertson Jr. et al. teaches an apparatus for measuring ventilation comprising a first electromagnet which is functionally equivalent to a permanent magnet as claimed (column 2 line 4), a magnetometer which has an output signal (column 1 lines 64-65), a microprocessor to produce multiple readouts (column 2 lines 1-3) and a second magnet (column 1 lines 63-64) attached at a different site. Robertson Jr. et al. fail to teach that the two magnets are oriented in the same direction. Somogyi et al teach that the magnets can be oriented in the same direction (column 5 lines 10-13). It would be obvious to one skilled in the art to orient the magnets in the same direction as Somogyi et al. teach the movement of the magnets changes the summed magnetic field such that a detector can measure and relate that to a calculated parameter (column 5 lines 22-26).

37. Claim 30: As stated above Robertson Jr. et al. teach an apparatus for measuring ventilation. Robertson Jr. et al. fail to teach that the magnets are oriented such that the poles of the magnets are oriented in opposite directions. Somogyi et al teach that the magnets can be oriented in opposite directions (column 3 lines 49-50). It would be obvious to one skilled in the art to orient the magnets in the same direction as Somogyi et al. teach the movement of the magnets changes the summed magnetic field such that a detector can measure and relate that to a calculated parameter (column 3 line 66-column 4 line 8).

Allowable Subject Matter

38. Claims 3, 5, 11, and 17-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 3 defines over the art because the prior art fails to show two magnets with different strengths. Claim 5 defines over the art because prior art fails to define two sensors with different sensitivities. Claim 11 defines over the art because prior art fails to show a magnet and an electrode affixed to an attachment mechanism. Claims 17-20 define over the art because the prior art fails to show any adjustments to achieve relative strengths.

Conclusion

39. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zoe E. Baxter whose telephone number is 571-272-8964. The examiner can normally be reached on Monday-Friday 7:30am-4:00pm.

40. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Marmor II can be reached on 571-272-4730. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

41. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Zoe E. Baxter
Examiner
Art Unit 3735

ZEB

Charles A Marmor, II
SPE Art Unit 3735